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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/691,236	10/23/2003	John E. Stauffer	STF-121-A	6001

7590 05/20/2004

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EXAMINER

THOMAS, ERIC W

ART UNIT	PAPER NUMBER
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2831

DATE MAILED: 05/20/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/691,236

Applicant(s)

STAUFFER, JOHN E. 

Examiner

Eric W Thomas

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>10/03</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Specification

The disclosure is objected to because of the following informalities:

Paragraph 7, line 5, the examiner is not sure what is meant by "100 mesh".

Appropriate correction is required.

Claim Objections

Claim 8 is objected to because of the following informalities:

Claim 8, line 2, the limitation, "100 mesh" is confusing. The examiner is not sure what is meant by "mesh."

Appropriate correction is required.

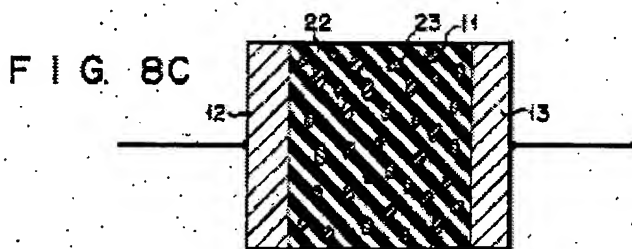
Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Akiyama et al. (US 4,593,332).



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Akiyama et al. disclose in fig. 8C, a capacitor comprising a mixture of electrically conductive particles (23) and non-conductive particles (11 – col. 7 lines 29-35), the mixture being spaced between two parallel plates (12, 13) to which leads are attached; wherein the electrical conductive particles comprise a magnetic material that renders them responsive to the application of a magnetic field (*as suggested in col. col. 7 lines 50-56).

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 9-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Akiyama et al. (US 4,593,332).

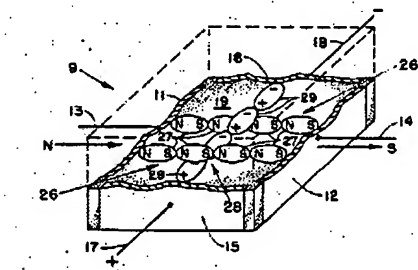
Regarding claim 9, Akiyama et al. disclose the claimed invention except for the conductive and nonconductive particles are spherical in shape. It would have been an obvious matter of design choice to form the conductive/nonconductive particles with a spherical shape, since such a modification would have involved a mere change in the shape of a component, a change of shape is generally recognized as being within the level of ordinary skill in the art. *Span-Deck Inc. V. FabCon, Inc.*, 215 USPQ 835.

Regarding claim 10, Akiyama et al. disclose the claimed invention except for the conductive and nonconductive particles are spheroidal in shape. It would have been an obvious matter of design choice to form the conductive/nonconductive particles with a

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spheroidal shape, since such a modification would have involved a mere change in the shape of a component, a change of shape is generally recognized as being within the level of ordinary skill in the art. *Span-Deck Inc. V. FabCon, Inc.*, 215 USPQ 835.

3. Claims 1-3, 6-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hrach et al. (US 3,535,602) in view of Walpita et al. (US 5,739,193).



Hrach et al. disclose in fig. 2, a mixture of electrically conductive particles and a dielectric material, the mixture being spaced between two parallel plates (11, 12) to which leads are attached; wherein the electrical conductive particles comprise a magnetic material that renders them responsive to the application of a magnetic field.

Hrach et al. disclose the claimed invention except for the mixture comprises non-conductive particles.

Walpita et al. teach the use of a dielectric material comprising barium titanate filler (powder) (see examples and col. 4 lines 30-41).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the capacitor of Hrach et al. by using a dielectric material as taught by Walpita et al., since such a modification would provide the capacitor with a dielectric material having a high dielectric constant (improved capacitance).

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Regarding claim 2, Hrach et al. disclose the dielectric has been exposed to a magnetic field to orientate the electrically conductive particles (col. 2 lines 30-70).

Regarding claim 3, Hrach et al. disclose the conductive particles (magnetic material) are iron (col. 3 lines 45-50).

Regarding claim 6, Walpita et al. teach that the non-conductive particles are a ceramic.

Regarding claim 7, Walpita et al. teach that the non-conductive particles are barium titanate.

Regarding claim 8, Hrach et al. disclose the conductive particles are 1 micron in size (col. 3 lines 30-45) and Walpita et al. teach that the non-conductive particles are 1 micron in size (see examples).

4. Claims 4-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hrach et al. (US 3,535,602) and Walpita et al. (US 5,739,193) as applied to claim 1 above, and further in view of Hertz (US 3,988,651).

Hrach et al. disclose the claimed invention except for the electrically conductive particles are plated.

Hertz et al. teach that it is common in the capacitor art to plate conductive particles using a noble metal.

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the capacitor of Hrach et al. by applying a noble metal to the base metal (iron) conductive particles as taught by Hertz et al., since such a modification would improve the electrical conductivity of the iron filaments.

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Regarding claim 5, Hertz et al. teach that the metal is platinum.

Conclusion

In order to ensure full consideration of any amendments, affidavits, or declaration, or other documents as evidence of patentability, such documents must be submitted in response to this Office action. Submissions after the next Office action, which is intended to be a final action, will be governed by the requirements of 37 CFR 1.116 which will be strictly enforced.

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

2003/0178221 – teaches an increased conductivity by applying a Pt coating over Fe particles.

4,953,273 – teaches the use of a ceramic/conductive particle layer sandwiched between two metallic layers.

4,876,140 – discloses a plastic layer comprising magnetic powder.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eric W Thomas whose telephone number is (571) 272-1985. The examiner can normally be reached on M, T, Sa 9:00AM - 9:30PM; W, Th, F 5:30PM-10:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dean Reichard can be reached on (571) 272-1984. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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CJL
5/14/04